Forklift Alternators

Forklift Alternators - A machine utilized so as to convert mechanical energy into electrical energy is actually called an alternator. It can perform this function in the form of an electric current. An AC electrical generator could in essence likewise be labeled an alternator. Nevertheless, the word is usually utilized to refer to a small, rotating device powered by internal combustion engines. Alternators which are located in power stations and are driven by steam turbines are actually called turbo-alternators. Nearly all of these devices use a rotating magnetic field but from time to time linear alternators are utilized.

A current is induced in the conductor whenever the magnetic field surrounding the conductor changes. Generally the rotor, a rotating magnet, spins within a set of stationary conductors wound in coils. The coils are situated on an iron core called the stator. Whenever the field cuts across the conductors, an induced electromagnetic field or EMF is generated as the mechanical input causes the rotor to turn. This rotating magnetic field generates an AC voltage in the stator windings. Typically, there are 3 sets of stator windings. These physically offset so that the rotating magnetic field generates 3 phase currents, displaced by one-third of a period with respect to each other.

"Brushless" alternators - these make use of brushes and slip rings together with a rotor winding or a permanent magnet to produce a magnetic field of current. Brushlees AC generators are normally found in larger devices such as industrial sized lifting equipment. A rotor magnetic field could be produced by a stationary field winding with moving poles in the rotor. Automotive alternators often use a rotor winding that allows control of the voltage produced by the alternator. It does this by changing the current in the rotor field winding. Permanent magnet machines avoid the loss due to the magnetizing current in the rotor. These devices are restricted in size because of the cost of the magnet material. As the permanent magnet field is constant, the terminal voltage varies directly with the generator speed.